



# Guitar Pickup Winder

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## SUMMARY

Guitar pickup making is difficult because, since the wire is as fine as a human hair, it tends to break very easily. Problem solved by using a 9-volt DC toy motor run at 6 volts.

## Step 1 — Guitar Pickup Winder



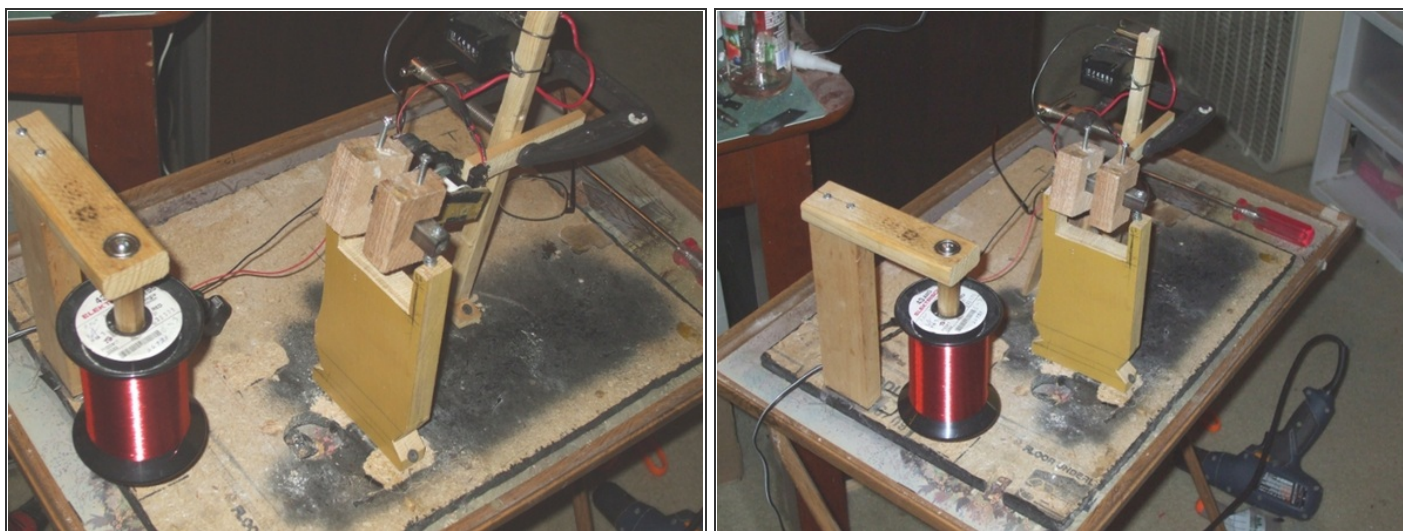
- Guitar pickup winder (UPDATED)... The bobbin is turned by a DC toy motor running on 6 volts instead of 9. Reducing the voltage of the DC motor reduces its speed, but more importantly reduces its torque to the point where the wire won't break even if you hold the wire so it can't move.
- The wire spool is held by a wood dowel that hangs on a wood support. A 3/4-inch diameter ball bearing sits in a 3/4-inch hole that goes halfway through the support. The remaining half of the hole's depth is 1/4" in diameter. A screw goes through the center of the bearing and the hole and screws into the end of the dowel in the center. The other end of the dowel has a small screw to keep the wire spool from falling off. The whole assembly allows the wire spool to turn very freely without wobble.
- The bobbin holder has a 1-inch dowel 1/2 inch in length. A 1x2-inch piece of 1/8-inch hobby plywood is attached as the platform for the bobbin. On the dowel there is an aluminum sheet metal piece attached which trips a counter switch (Radio Shack) that counts each turn of the bobbin. The counter is a 6-volt impulse counter that is non-resettable (available at [mpja.com](http://mpja.com) for about \$5). This counts the turns of the bobbin. You will need to determine how many winds you want, then add that number to what the counter displays to get the stopping point for the counter.

## Step 2



- The guide for the wire is made from a piece of wood with a notch on one end. A 3/8" square iron tube (hardware store) about 3 inches long is attached with machine screws into the wood. It uses springs on the screws so you can adjust its angle in relation to the bobbin. "U" shaped wood blocks ride on the tube and are adjustable so you can set the stop point at the sides of the bobbin so the wire will not ride off the bobbin.

## Step 3



- This is my fastest winder so far. It is smoking hot. At 850 rpm, I can wind a single coil to 16,000 turns using 43-gauge wire in about 15 minutes. No hangups, no problems.
- To see the winder in action go to: <http://www.youtube.com/watch?v=L75-qBUkO...>

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